Department of Commerce
Digital Department

IT Architecture Plan
Technical Structure

Thomas J. Pennington
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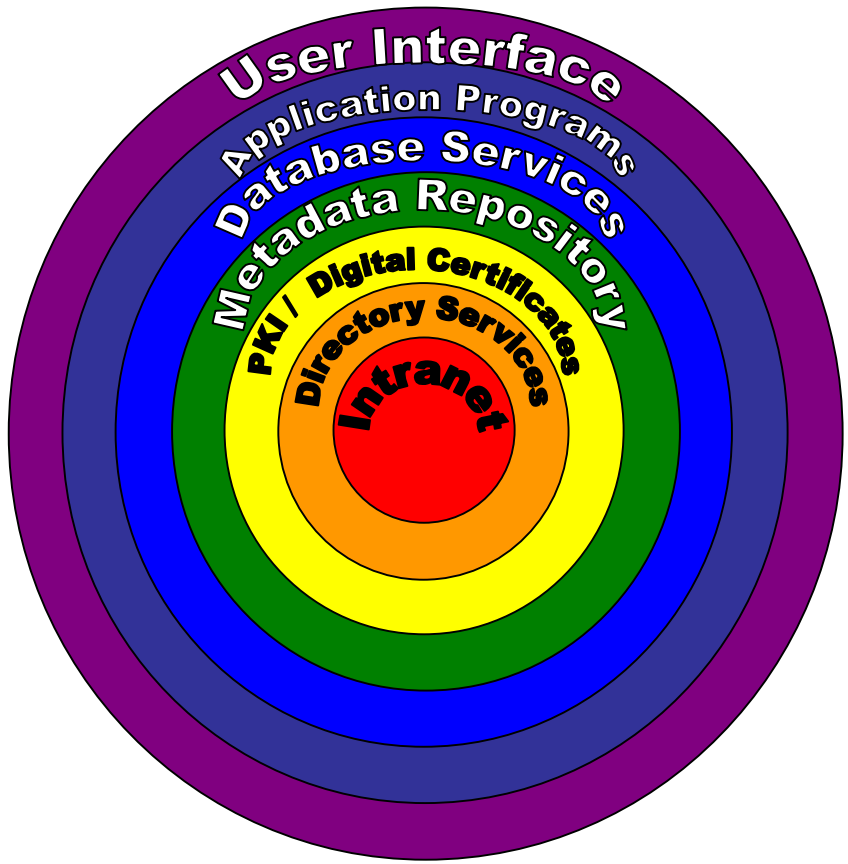
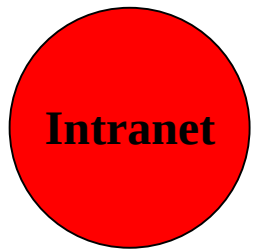
IT Architecture: Technical View

- Logical layers of the technical architecture.
- Most critical layers in the center.
- Conformance to a specific standard or protocol decreases as you move out from the center.



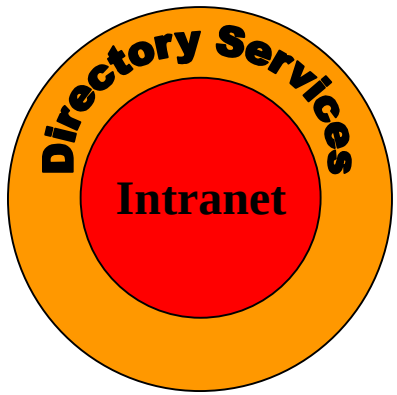
Primary Layer - Network



Network Protocol

- The network protocol is key for the entire process.
- TCP/IP is a de facto industry standard and supported by all major vendors.
- It is the core of the Internet, and used to deploy most Intranets as well.

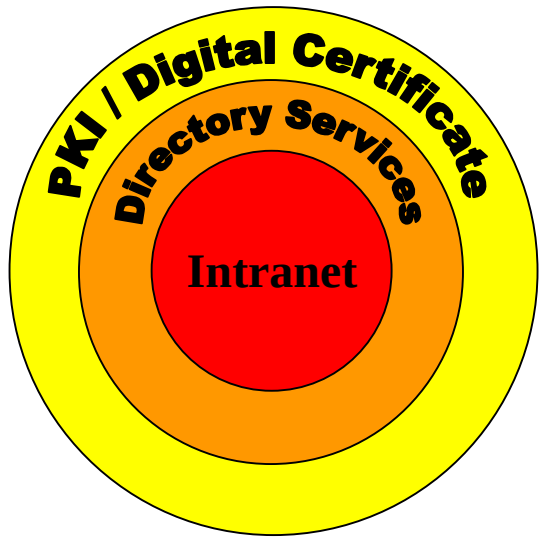
Directory Services



Directory Services

- Provides single source for information on contacting staff.
- Provides workflow information for applications.
- Repository for Digital Signature and Certificates of Authority.
- Provides first level for Application & Data Access Control

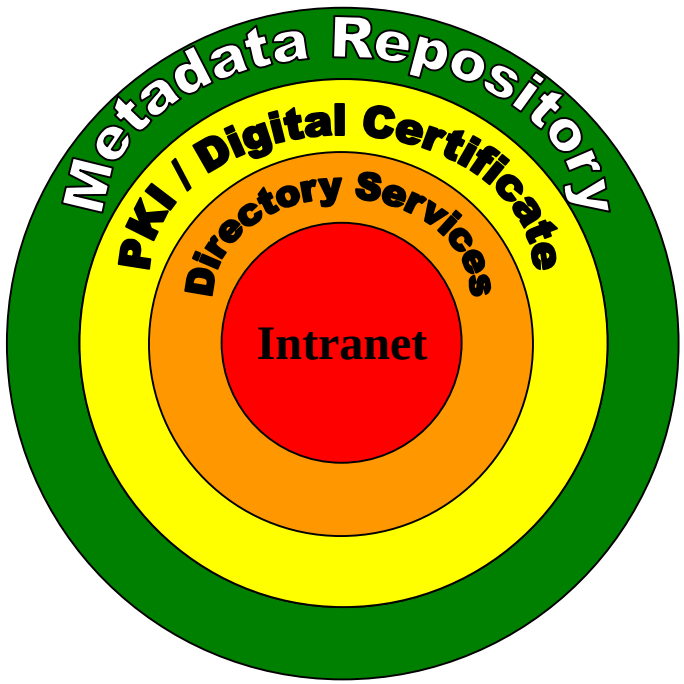
PKI / Digital Certificates



Security - PKI and Certificate Authority

- Crucial to establish a secure transaction platform.
- Multiple vendors which are not currently interoperable.
- At a minimum, each application must use a single product to provide security.

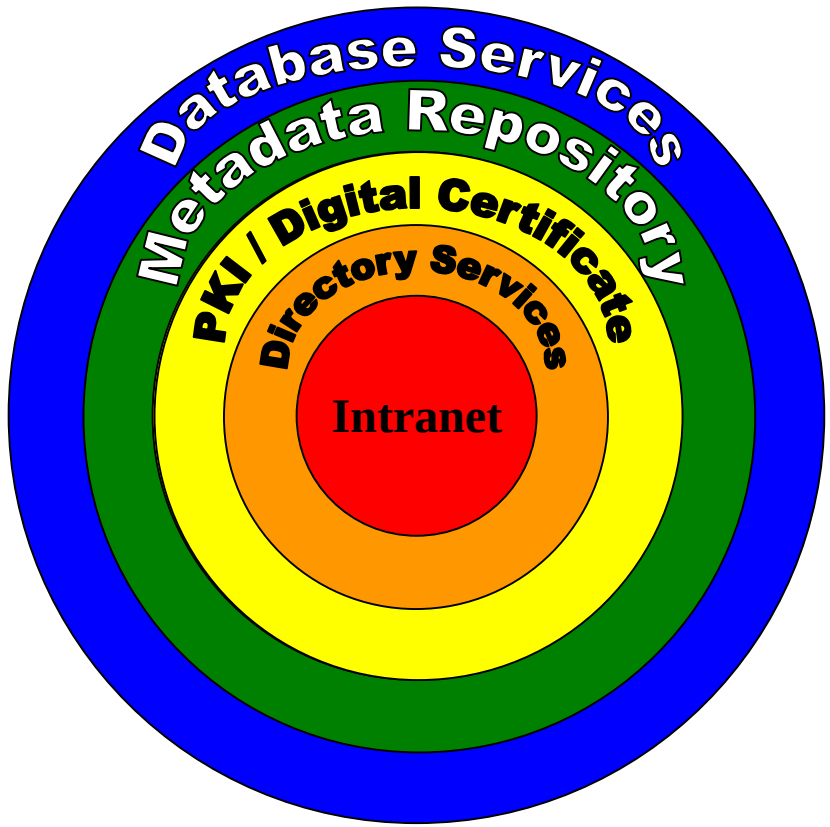
MetaData Repository



MetaData Repository

- Provide data definition and content for all data elements.
- Provide data conversion information to bridge between disparate systems.
- Define common definition of data elements and enforce use in all subsequent development.

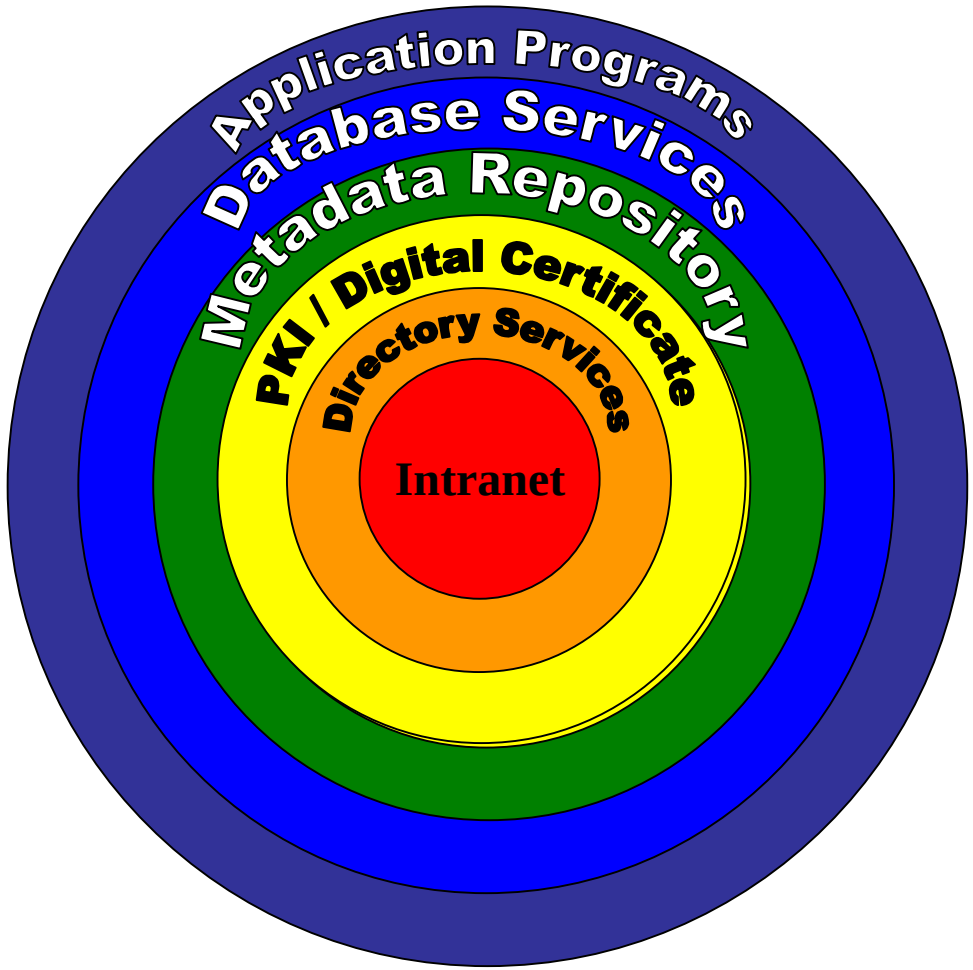
Database Management Services



Database Management Services

- Must be compliant with existing SQL standards.
- Provides accessibility, reliability and integrity of Department data.
- Provides foundation for constructing applications to add/use the data.
- Should be able to seamlessly operate in conjunction with other data stores.

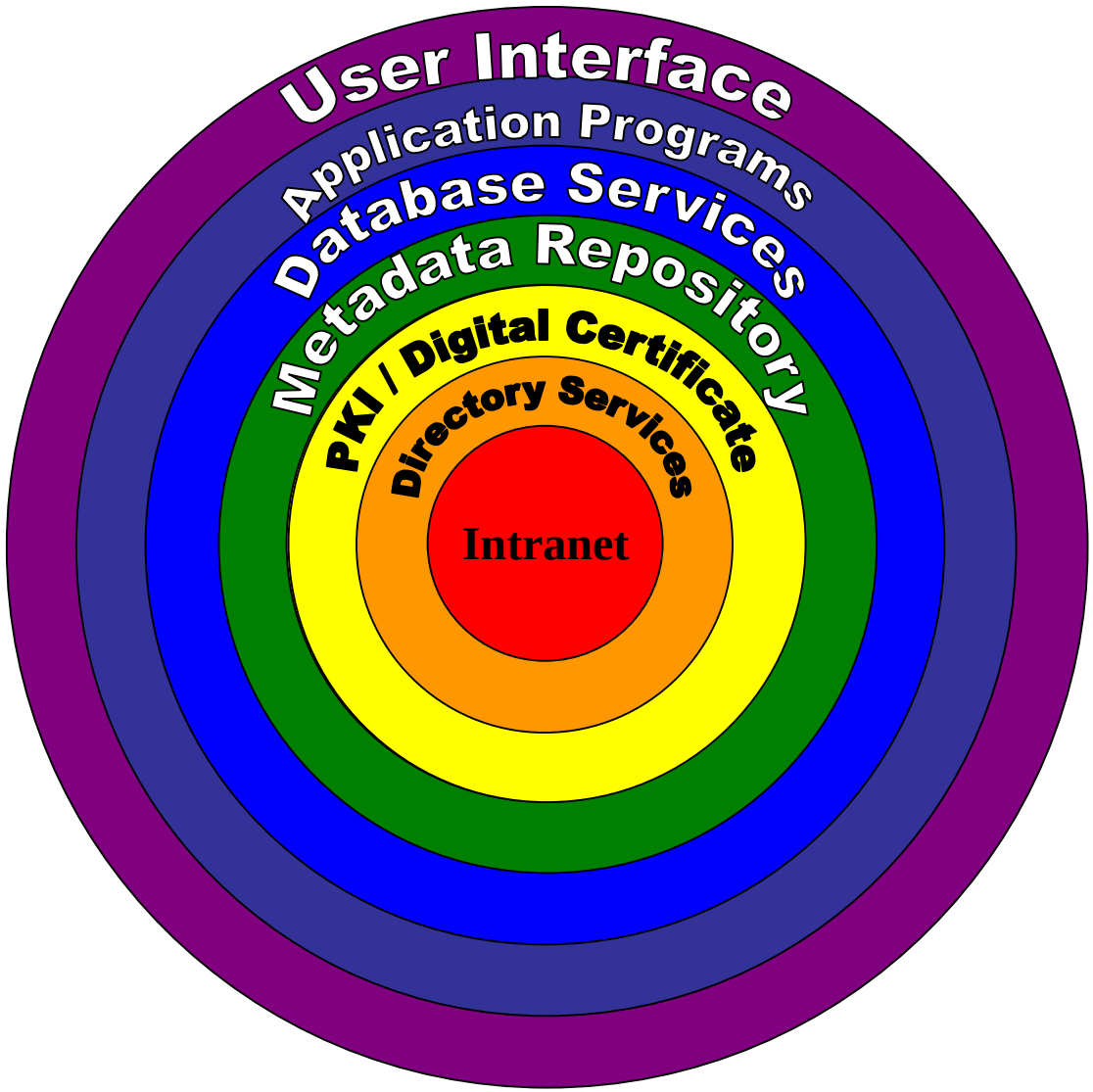
Application Programs



Application Programs

- Provide mechanism for automating established business processes.
- Enforce defined business rules.
- Provide ability to access and manipulate data across multiple data stores.
- Construction utilizes standardized objects and modules which are reusable.

User Interface



User Interface

- Should be platform independent.
- Should provide a consistent look and feel for all user applications.
- Should provide a single point of entry to all applications the user has access to.
- Should provide means for authenticating a user in conjunction with Directory Services and with PKI/CA.